

Gold Star Audio

# SERVICE MANUAL

## for service technician



# GoldStar

**STEREO CASSETTE RECORDER  
with RADIO**

**TSR-580** (FM/SW/MW/LW)

**TSR-585** (FM/SW<sub>2</sub>/SW<sub>1</sub>/MW)

### SPECIFICATIONS

This specifications may be changed for improvement of performance without notice.

#### Radio section

Circuit system . . . . . Superheterodyne  
AM/FM MPX Stereo  
Antenna . . . . . AM: Ferrite ant.  
FM: Double rod ant.  
Frequency range . . . . . FM: 87.5-108MHz  
SW<sub>2</sub>: 6.8-22.5MHz  
SW<sub>1</sub>: 2.25-7.2MHz  
SW: 5.8-18.3MHz  
MW: 525-1,605kHz  
LW: 150-350kHz  
Intermediate frequency . . . . . AM: 455 (465) kHz  
FM: 10.8MHz  
Usable sensitivity . . . . . MW: 54 dB LW: 60 dB  
FM: 4 $\mu$ V SW: 45 dB  
SW2: 45 dB SW1: 56 dB  
Signal to noise ratio . . . . . AM: 40 dB  
FM: 54 dB  
Frequency response (0±4 dB)  
FM: 100-10,000 Hz  
FM stereo separation . . . . . 36 dB

#### Cassette section

Circuit system . . . . . 4 Track 2 Ch. stereo

Recording system . . . . . AC Bias (57 kHz)

Erasing system . . . . . AC Erase

F.F. & Rew time . . . . . 90 sec (c-60)

Wow & Flutter . . . . . 0.09% (WRMS)

Frequency response

P/B . . . . . Nor.: 100-10,000Hz

CrO<sub>2</sub>: 100-12,000Hz

REC/PB . . . . . Nor: 100-8,000Hz

CrO<sub>2</sub>: 100-10,000Hz

Signal to Noise ratio

P/B . . . . . 50 dB

REC/PB . . . . . 45 dB

#### General

Power output (10% T.H.D.) . . . . . 4.5W + 4.5W

Power supply . . . . . AC 220V 50Hz

DC 12V (DM 1.5V x 8)

Semiconductors . . . . . 7IC's, 37TR's, 31Diodes,  
4 LED's

Power consumptions . . . . . 26W

Speakers . . . . . Woofer 16cm (3.2Ω) x 2  
Tweeter 5cm (4Ω) x 1

Weight . . . . . 7.3kg (without Batt)

Dimensions . . . . . 520(W) x 260(H) x 130(D) mm

## IMPORTANT SAFETY NOTICE

Components of important for safety are shaded on the schematic diagram and on the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent electrical shock, fire, or other hazards. Do not modify the original design without permission of Gold Star Co., Ltd.

### To the service technician

The service manual contains detailed service information for Model TSR-580/585. Illustration of the model appears on front cover.

Please give attention to next caution.

The followings are the safety servicing guidelines for all audio amplifiers and radio receivers. Service work should be performed only after you are familiar with all of the following safety guide. To do otherwise increases the risk of potential hazards and injury to the user.

### Safety guide

1. Be sure that all components are positioned in such a way to avoid possibility of adjacent components shorts. This is especially important on those chassis which are transported to and from the repair shop.
2. Always replace all protective devices such as insulators and barriers after working on a receiver.
3. Check for frayed insulation on wires including the AC-cord. Also check across-the-line-components for damage and replace if necessary.
4. All fuses and certain resistors and capacitors which are the flameproof type must be replaced with exact same types to prevent potential fire hazard.
5. After re-assembly of the set always perform an AC-leakage test on the exposed metallic parts of the cabinet such as the knobs, antenna terminal, etc. to be sure the set is safe to operate without danger of electrical shock.

### To order repair parts

Part orders must contain

1. Model Number — found on front cover in this service manual.
2. Part Number, Description and Quantity.

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## DIAL CORD ARRANGEMENT

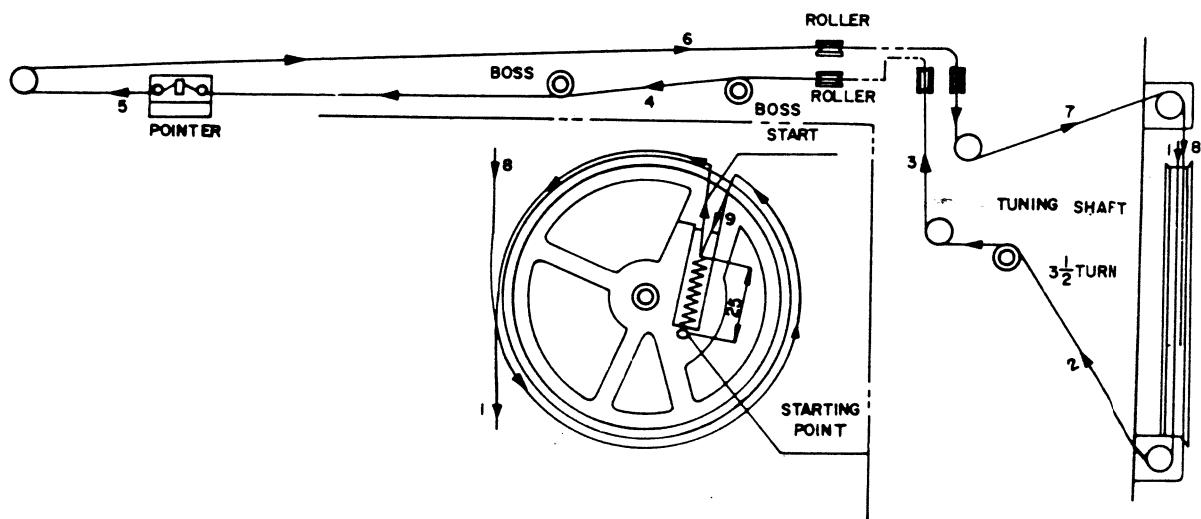


Fig. 1.

Set the varicon to minimum frequency and string the cord by following the number sequence order as shown in Fig. 1.

## ALIGNMENT INSTRUCTIONS

This cassette radio has been aligned at the factory and normally will not require further adjustment. As a result, it is not recommended that any attempt is made to modificate any circuit. If any parts are replaced or if anyone tampers with the adjustment, realignment may be necessary.

### Test equipment required

1. AM/FM signal generator
2. IF sweep generator (10.7 MHz) for FM
3. IF sweep generator (455 kHz or 465 kHz) for AM
5. Standard loop antenna for AM
6. VTVM
7. Oscilloscope
8. Frequency counter
9. Audio frequency oscillator
10. Test tapes
  - a) MTT-144 (10 kHz)
  - b) MTT-122B (1 kHz)
  - c) MTT-501 (Blank tape)

## 1. CASSETTE ALIGNMENT

### Tape head and capstan cleaning

1. Periodically clean the tape head, capstan drive shaft and other tape handling surfaces to insure proper tape handling and optimum frequency response.
2. Use a cotton swab dipped in head cleaner or denatured alcohol to clean all tape handling surfaces. Wipe dry.

### Tape head demagnetization

When servicing tape unit, do not use magnetized screwdrivers or wrenches near the tape head since they can magnetize the head.

A magnetized head will result in loss of high frequency response and increased noise.

### Head adjustment

Head adjustment is normally required when the head is replaced or for cases of cross-talk and poor high frequency response.

### Adjustment points

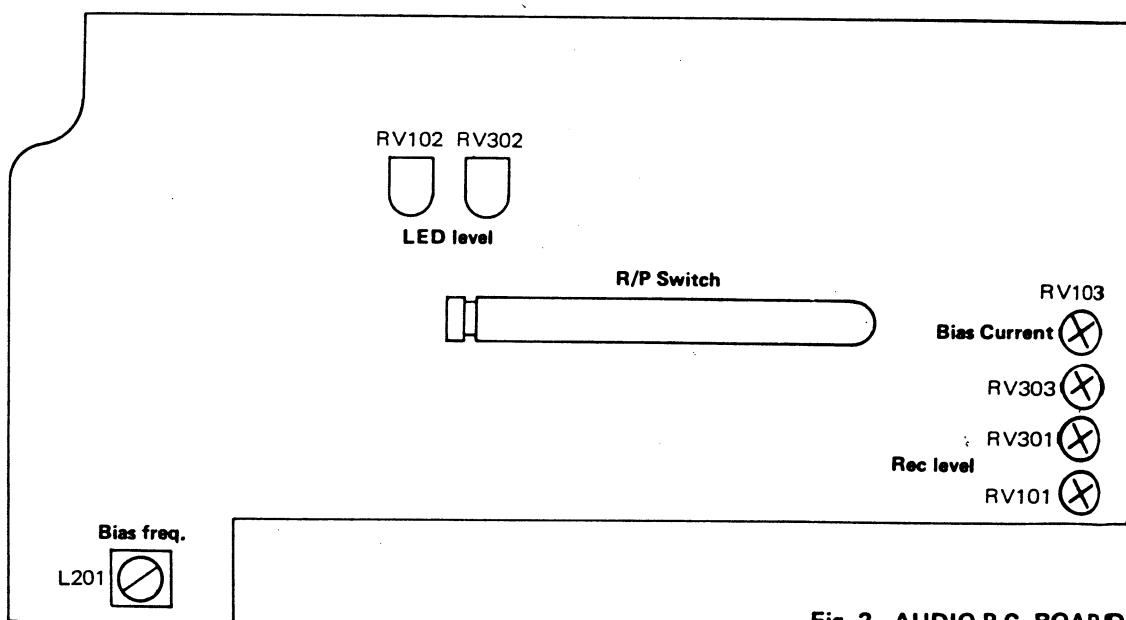
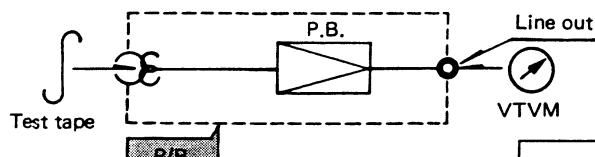


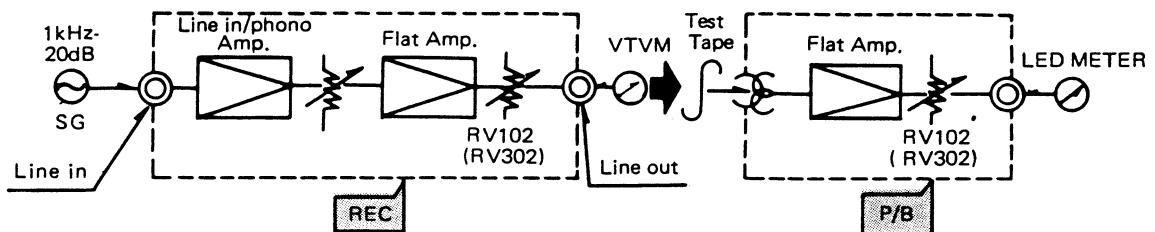
Fig. 2. AUDIO P.C. BOARD

### AZIMUTH ADJUSTMENT



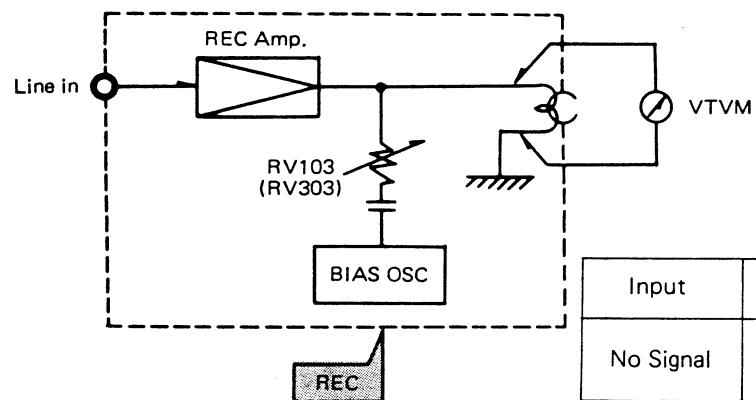
Input	Adjust for	Adjustment
MTT-114 (10kHz)	Maximum	Azimuth Adjusting Screw

### LED METER ADJUSTMENT



NO.	Input	Adjust for	Adjustment
1	1kHz-20dB	50mV	SG output
2	MTT-112B (1kHz)	All LED should be lighted	L: RV102 R: RV302

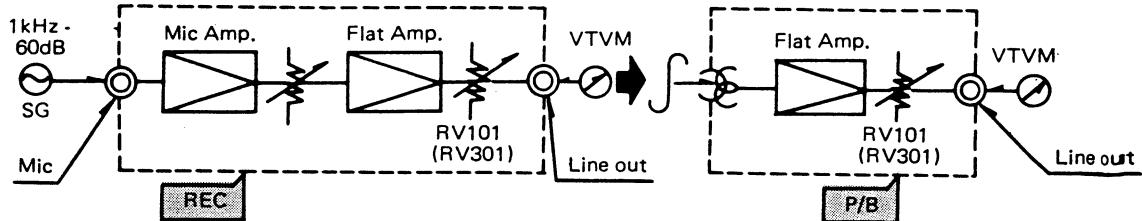
### BIAS CURRENT ADJUSTMENT



Input	Adjust for	Adjustment
No Signal	AC 10V ± 0.5V	L: RV103 R: RV303

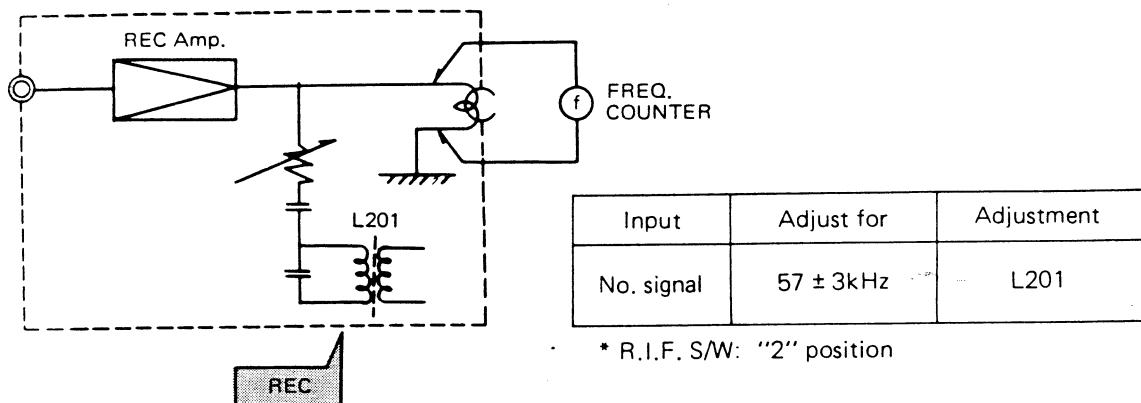
\* Tape select: Normal

### REC LEVEL ADJUSTMENT



NO.	Input	Adjust for	Adjustment	Remark
1 (REC/PB)	1kHz-60dB	A	L: RV101 R: RV301	REC MODE: AUTO TAPE SEL.: NOR
2 (P/B)	MTT-112B (1kHz)	Lower about 3dB than A	Confirm	"

### BIAS FREQUENCY ADJUSTMENT



### 2. RADIO ALIGNMENT

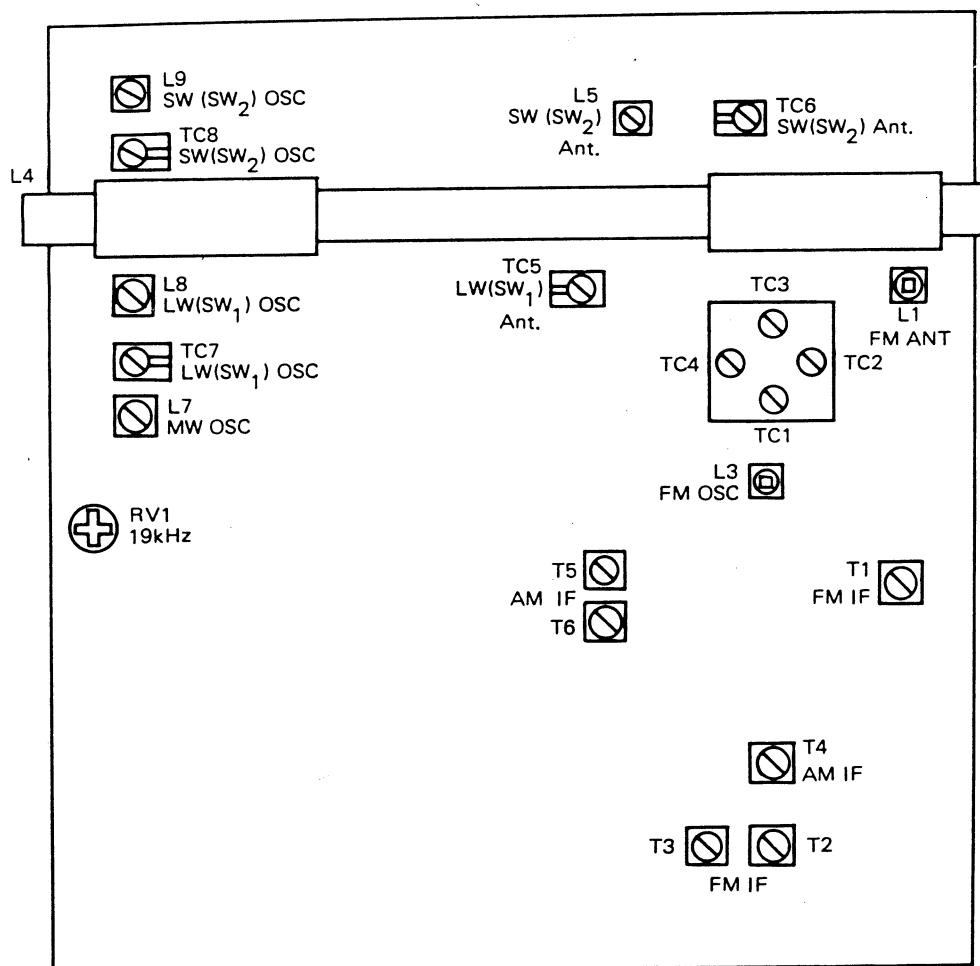


Fig. 3 RF P.C. BOARD

**AM Alignment Chart**

Step	Item TSR-580 (TSR-585)	Instrument & Frequency	Test Point		Dummy Ant.	Dial Setting	Adjustment Point	Purpose
			Input Terminal	Output Terminal				
1	AM-IF	AM IF sweep generator and oscilloscope or AM IF genescope	AM IF Input	Detector output (C68)	Generator output Probe "A"	Tuning-Gang counter-clockwise (Lowest freq.)	T4 T5 T6	Adjust for the scope pattern with specified marker (IF freq.) as illustrated in fig. 5 (Note 1)
2	MW Oscilla-tor	a AM SSG 515kHz (400Hz, 30% Mod) and VTVM	MW wave magnet ant.	Speaker output or detector output	None	Tuning-Gang counter-clockwise (Lowest freq.)	L7	Adjust for maximum gain.
		b AM SSG 1650kHz (400Hz, 30% Mod) and VTVM				Tuning-Gang clockwise (Highest freq.)	TC4	
		c Repeat the above item 2-(a), (b) for minimum change.						
3	MW Track-ing	a AM SSG 600kHz (400Hz, 30% Mod) and VTVM	MW wave magnet ant.	Speaker output terminal or detector output	None	Tune to signal	L4 MW ant. coil	Adjust for maximum gain.
		b AM SSG 1400kHz (400Hz, 30% Mod) and VTVM					TC3	
		c Repeat the above item 3-(a), (b) for minimum change.						
4	LW (SW1) Oscilla-tor	a AM SSG 150kHz (2.3MHz) (400Hz, 30% Mod) and VTVM	LW (SW1) wave magnet ant.	Speaker output terminal or detector output	None	Tuning gang fully counter clockwise (Lowest fre.)	L8	Adjust for maximum gain.
		b AM SSG 350kHz (7.0MHz) (400Hz, 30% Mod) and VTVM				Tuning gang fully clockwise (Highest fre.)	TC7	
		c Repeat the above item 4-(a), (b) for minimum change.						

### AM Alignment Chart (cont'd)

Step	Item TSR-580 (TSR-585)	Instrument & Frequency	Test Point		Dummy Ant.	Dial Setting	Adjustment point TSR-580 (TSR-585)	Purpose	
			Input Terminal	Output Terminal					
5	LW (SW1) Tracking	a	AM SSG 160kHz (2.7MHz) (400Hz, 30% Mod) and VTVM	Speaker output terminal or detector output	None	Tune to signal	L4 LW ant. coil (SW <sub>1</sub> ant. coil)	Adjust for maximum gain.	
		b	AM SSG 330kHz (6.3MHz) (400Hz, 30% Mod) and VTVM	LW (SW1) wave magnet ant.			TC5		
		c	Repeat the above item 5-(a), (b) for minimum change.						
6	SW (SW2) Oscilla- tor	a	AM SSG 6MHz (7MHz) (400Hz, 30% Mod) and VTVM	Ant. input	Sp. output ter, or detector output	SW dummy ant (Probe "C")	Tuning gang fully counter clockwise (Lowest fre.)	L9	Adjust for maximum gain.
		b	AM SSG 18MHz (22 MHz) (400MHz, 30% Mod) and VTVM				Tuning gang fully clockwise (Highest fre.)	TC8	
		c	Repeat the above item 6-(a), (b) for minimum change.						
7	SW (SW2) Track- ing	a	AM SSG 6.5MHz (8MHz) (400Hz, 30% Mod) and VTVM	Ant. input	Speaker output ter, or detector output	SW dummy ant. (Probe "C")	Tune to signal	L5 SW ant. coil (SW2 ant. coil)	Adjust for maximum gain.
		b	AM SSG 16MHz (20MHz) (400Hz, 30% Mod) and VTVM					TC6	
		c	Repeat the above item 7-(a), (b) for minimum change.						

### FM Alignment Chart

Step	Item	Instrument & Frequency	Test Point		Dummy Ant.	Dial Setting	Adjustment point	Purpose	
			Input Terminal	Output Terminal					
1	FM-IF	FM IF Sweep Generator and oscilloscope or FM IF genescope	FM-IF Input	FM Det Output (C68)	Generator Output Probe "A"	Tuning Gang fully counter-clockwise (Lowest fre.)	T1	Adjust for scope Pattern with specified marker (10.7MHz) as illustrated in Fig. 7 & 8 (note 2, 3)	
							T2		
2	FM Oscilla-tor	a	FM SSG 87MHz (400Hz 22.5kHz Deviation) and VTVM	Ant. Input	Speaker Output Terminal	Generator Output Probe "B"	Tuning Gang fully counter-clock wise (Lowest fre.)	L3	Adjust for maximum gain.
		b	FM SSG 109MHz (400Hz, 22.5kHz Deviation) and VTVM	Ant. Input	Speaker Output Terminal	Generator Output Probe "B"	Tuning Gang fully clockwise (Highest fre.)	TC1	Adjust for maximum gain.
		c	Repeat the above item 2-(a), (b) for minimum change.						
3	FM Tracking	a	FM SSG 90MHz (400Hz, 22.5kHz Deviation) and VTVM	Ant. Input Terminal	Speaker Output Terminal	Generator Output Probe "B"	Tune to signal	L1	Adjust for maximum gain.
		b	FM SSG 106MHz (400Hz, 22.5kHz Deviation) and VTVM	Ant. Input Terminal	Sepaker Output Terminal	Generator Output Probe "B"	Tune to signal	TC2	Adjust for maximum gain.
		c	Repeat the above item 3-(a), (b) for minimum change.						

### FM Multiplex Alignment

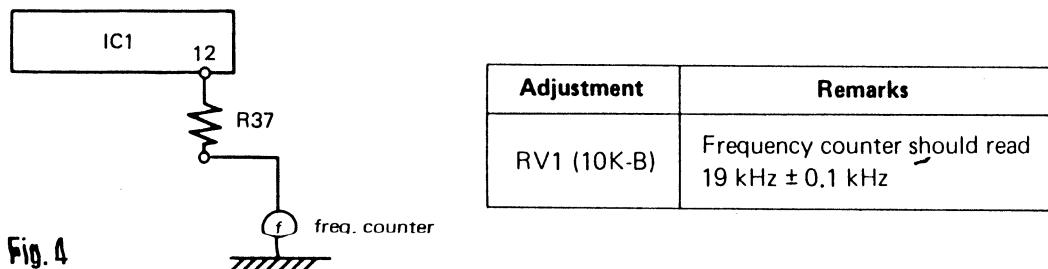


Fig. 4

**Note 1.:** Adjust T4, T5 and T6 to get maximum gain and symmetry in IF response as shown in Fig. 5.

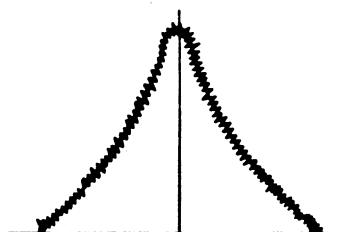


Fig. 5

IF response for weak input signal

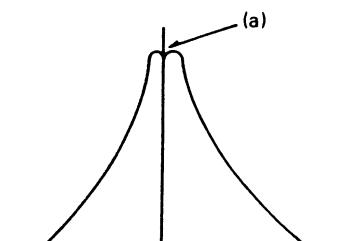


Fig. 6

IF response for strong input signal

After adjust IF response for weak input signal, supply strong input signal and also adjust T4, T5 and T6 to make part (a) flat as shown in Fig. 6.

**Note 2.:** Adjust output of sweep generator so that noise appears on IF-curve as shown in Fig. 7 below and adjust T1 and T2 for maximum indication.

**Note 3.:** Adjust T3 to be IF-curve into S-curve (See Fig. 8) and adjust T3 so that declined part of S-curve has to be just linear.

If ceramic filter is used in RF part, adjust T3 so that part (A) and part (B) are symmetrical on either side of vertical line, because the marker of 10.7MHz on sweep generator is not on the center of S-curve.

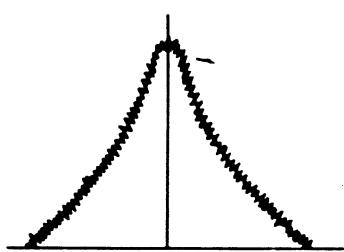


Fig. 7

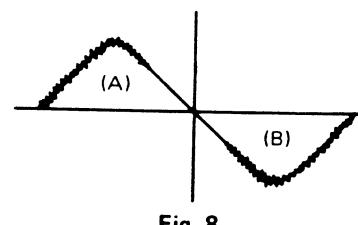
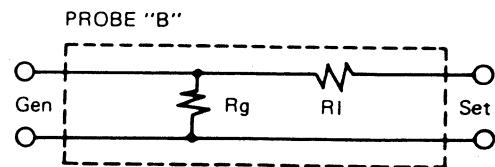
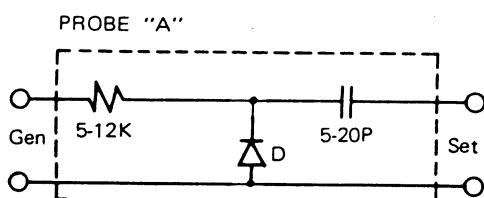


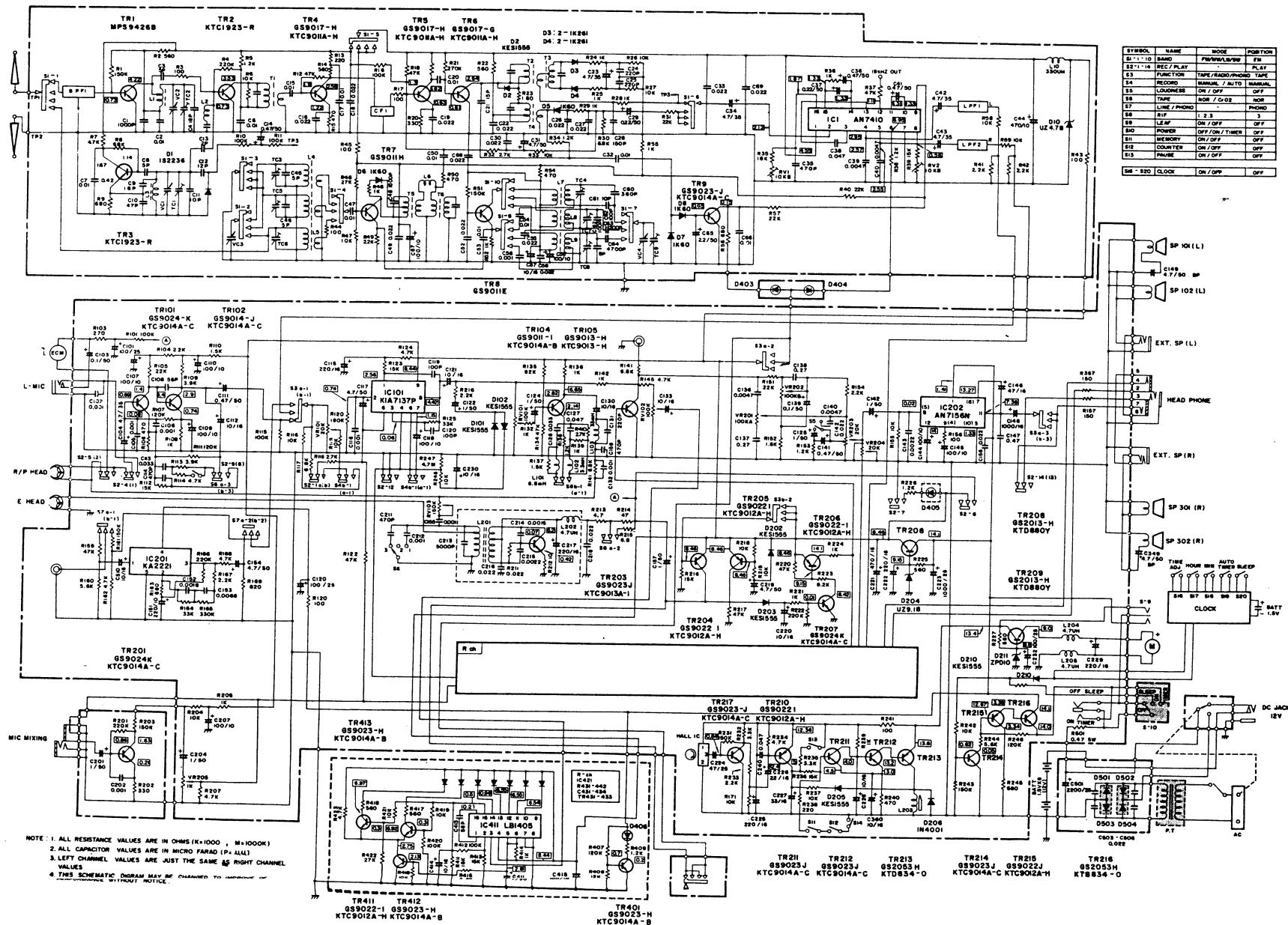
Fig. 8



Rg: FM SSG Output

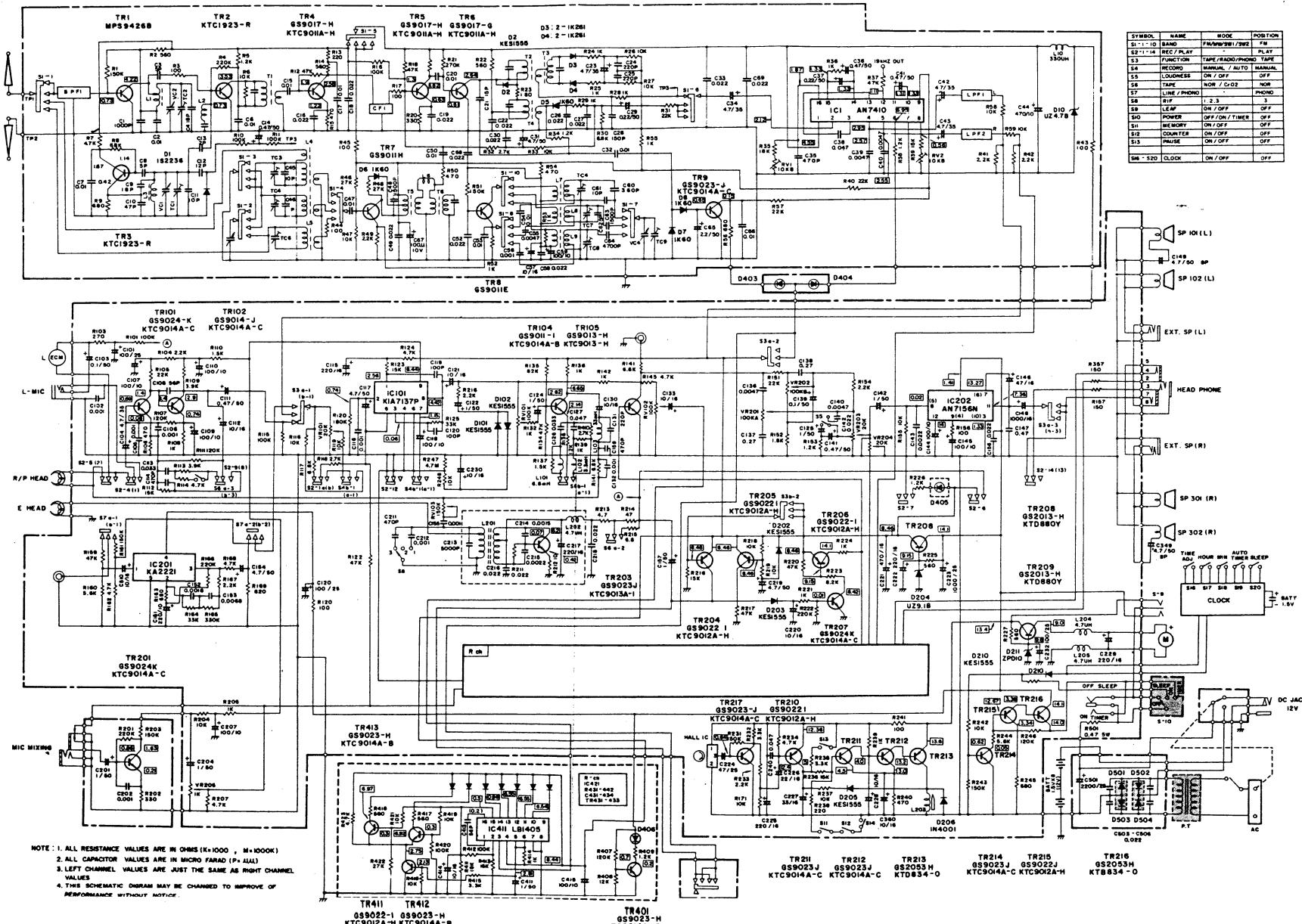
$$RI: 75 - \frac{Rg}{2}$$

## SCHEMATIC DIAGRAM (TSR-580: FM/SW/MW/LW)



NOTE: 1. ALL RESISTANCE VALUES ARE IN OHMS (K=1000, M=1000K)  
2. ALL CAPACITOR VALUES ARE IN MICRO FARAD (P=4.44)  
3. LEFT CHANNEL VALUES ARE JUST THE SAME AS RIGHT CHANNEL  
VALUES  
4. THIS SCHEMATIC DIAGRAM MAY BE CHANGED TO IMPROVEMENT OF  
MANUFACTURING WITHOUT NOTICE.

## SCHEMATIC DIAGRAM (TSR-585: FM/SW<sub>1</sub>/SW<sub>2</sub>/MW)



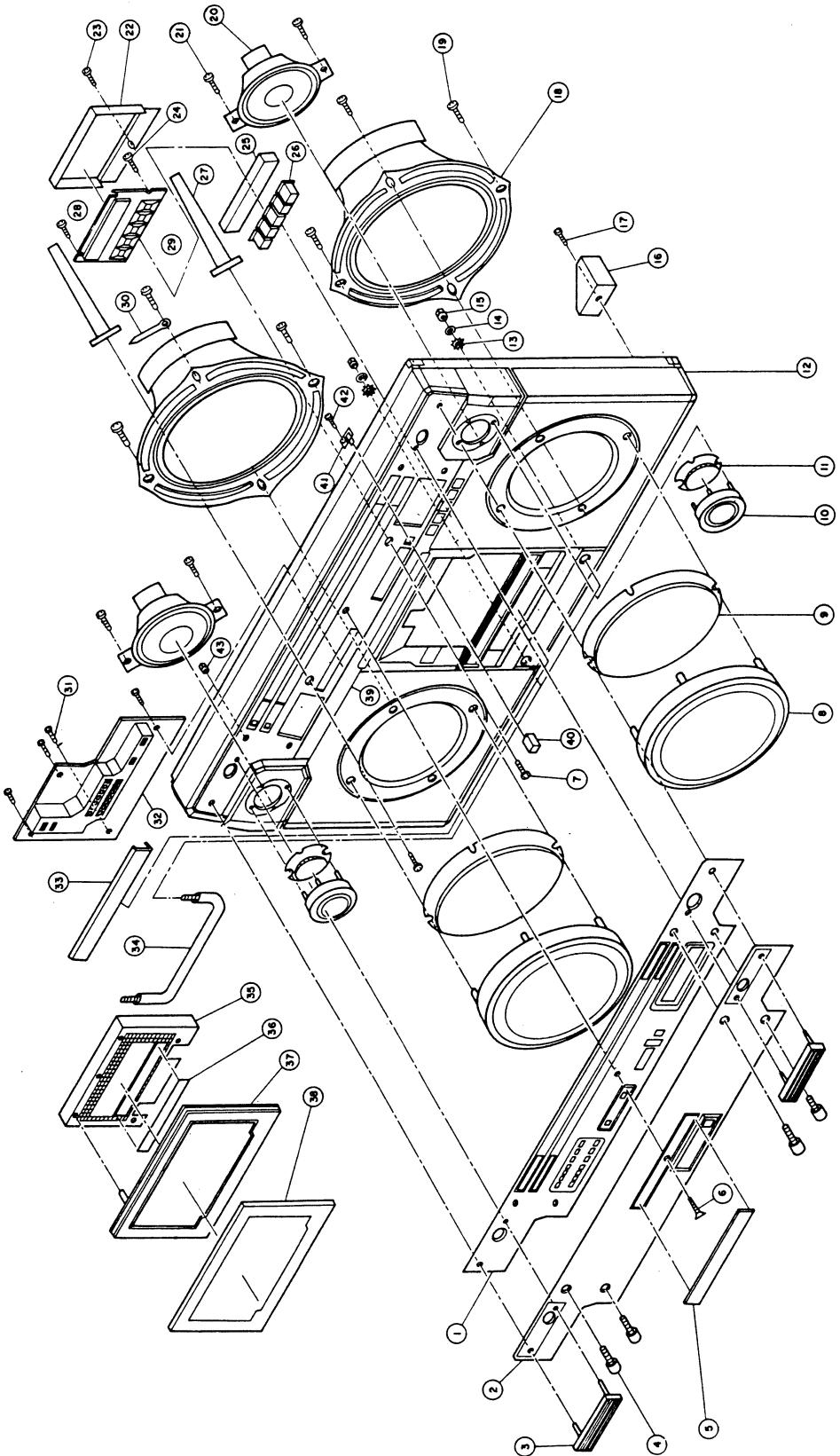
NOTE : 1. ALL RESISTANCE VALUES ARE IN OHMS (K=1000, M=1000K)  
 2. ALL CAPACITOR VALUES ARE IN MICRO FARAD (P=1000)  
 3. LEFT CHANNEL VALUES ARE JUST THE SAME AS RIGHT CHANNEL  
 VALUES  
 4. THIS SCHEMATIC DIAGRAM MAY BE CHANGED TO IMPROVE  
 OF PERFORMANCE WITHOUT NOTICE.

## ELECTRICAL SERVICE PARTS LIST

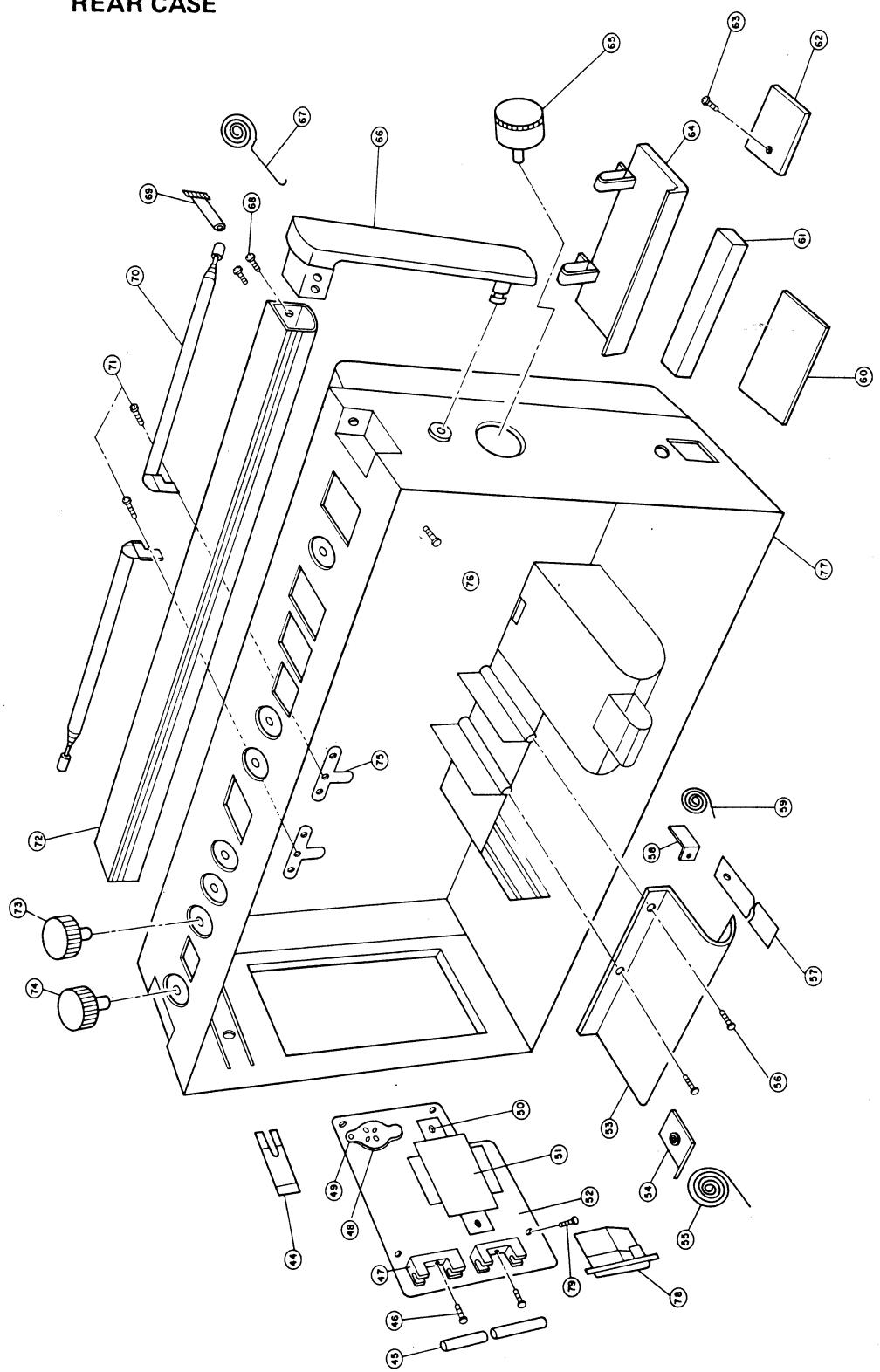
SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION			
<b>INTEGRATED CIRCUITS</b>								
IC1	668N061A	IC, AN7410	TR209	661N027A	TR, GS2013H			
IC101, 301	668-605A	IC, KIA7137P	TR210	661-030B	TR, GS9022I			
IC201	668-632A 668N063A	IC, KA2221 IC, LA3161		665-702B	TR, KTC9012A-H			
IC202	668N066A	IC, AN7156N	TR211, 212	665-886D 665-704B	TR, GS9023J TR, KTC9014A-C			
IC411, 421	668-132A	IC, LB1405	TR213	661N028A	TR, GS2053H			
<b>TRANSISTORS</b>								
TR1	662-601A	TR, MPS9426B	TR214	665-886D 665-704B	TR, GS9023J TR, KTC9014A-C			
TR 2, 3	665-819A	TR, KTC1923-R	TR215	661N026A 665-702B	TR, GS9022J TR, KTC9012A-H			
TR4, 5	661N007D 665-701B	TR, GS9017H TR, KTC9011A-H	TR216	661N028A	TR, GS2053H			
TR6, 7, 8	661N007C 665-701B	TR, GS9017G TR, KTC9011A-H	TR217	665-886D 665-704B	TR, GS9023J TR, KTC9014A-C			
TR9	665-886D 665-704B	TR, GS9023J TR, KTC9014A-C	TR401	665-886B 665-704B	TR, GS9023H TR, KTC9014A-C			
TR101, 301	661N025A 665-704B	TR, GS9024K TR, KTC9014A-C	TR411, 431	661-030B 665-702B	TR, GS9022I TR, KTC9012A-H			
TR102, 302	661N004E 665-704B	TR, GS9014J TR, KTC9014A-C	TR412, 413 432, 433	665-886B 665-704A	TR, GS9023H TR, KTC9014A-B			
TR104, 304	661N001F 665-704A	TR, GS9011I TR, KTC9014A-B	<b>DIODES</b>					
TR105, 305	661N003C 665-703B	TR, GS9013H TR, KTC9013H	D1	654-618A	DIODE, 1S2236			
TR201	661N025A 665-704B	TR, GS9024K TR, KTC9014A-C	D2	652-015B	DIODE, KDS1555			
TR203	665-886D 665-703C	TR, GS9023J TR, KTC9013A-I	D3, 4	651-001D	DIODE, FM2-1K261			
TR204, 205, 206	661-030B 665-702B	TR, GS9022I TR, KTC9012A-H	D5, 6, 7, 8	651-001C	DIODE, AM 1K60			
TR207	665-886D 665-704B	TR, GS9023J TR, KTC9014A-C	D10	654-622D	DIODE, UZ-4.7B			
TR208	661N027B	TR, GS2013G	D101, 102	652-015B	DIODE, KDS1555			
			D202, 203	652-015B	DIODE, KDS1555			
			D204	654-623F	DIODE, ZENER			
			D205	652-015B	DIODE, KDS1555			
			D206	652-005A	DIODE, 1N4001			
			D210	652-015B	DIODE, KDS1555			
			D211	654-612B	DIODE, ZENER ZPD10			

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBLO NO.	PART NO.	DESCRIPTION
D401, 402	653-109A	LED, LN 05202P	L101, 301	639-602F	COIL, PEAKING 6.6 mH
D403	653-401B	LED, LN317RP-TUNING	L102, 302	639-003N	COIL, PADDING 3.3 mH
D404, 405, 406	653-401A	LED, LN217RP-ST, REC, POWER	L103, 303	637-005B	COIL, PEAKING 33 mH
D501	652-021D	DIODE, M1-151R	L201	634-036C	COIL, TAPE OSC
D502	652-021C	DIODE, M1-151	L202	639-003I	COIL, PADDING 4.7 $\mu$ H
<b>SWITCHES</b>			L204, 205	639-003I	COIL, PADDING 4.7 $\mu$ H
S1	556N045A	SWITCH-BAND	T1	644-018F	TRANS, FM IF
S2	552N073B	SWITCH-REC/PLAY	T2	647-008C	DISCRIMINATOR
S3	556N044A	SWITCH-FUNCTION	T3	647-008D	DISCRIMINATOR
S4	556N050B	SWITCH-REC MODE	T4	644-019C	TRANS, AM IF
S5	556N050C	SWITCH-LOUDNESS	T5	644-019D	TRANS, AM IF
S6	556N052A	SWITCH-Nor/CrO <sub>2</sub>	T6	644-019G	TRANS, AM IF
S7	552N077A	SWITCH-PHONO/LINE IN	<b>VARIABLE RESISTORS</b>		
S8	552-614A	SWITCH-RIF	RV1	613N002F	VR, SEMI-FIXED 10KB
S10	556-072A	SWITCH-POWER	RV101, 301	613N002J	VR, SEMI-FIXED 100KB
S11	555N015B	SWITCH-MEMORY	RV103, 303	613N005H	VR, SEMI-FIXED 100KB
<b>COILS AND TRANSFORMERS</b>			VR101, 301	611N053P	VR, 20KA-REC MODE
L1	635-020E	COIL, FM OSC	VR201	611N027G	VR, 100KA-TREBLE
L2	635-602A	COIL, FM RF	VR202	611N072H	VR, 100KB-BASS
L3	635-003B	COIL, FM OSC	VR203	611N072F	VR, 20KA-VOLUME
L4	632N042B 632N042A	COIL, MW/LW ANT (TSR-580) COIL, MW/SW1 ANT (TSR-585)	VR204	611N089C	VR, 20KW-BALANCE
L5	634N020F 634N020D	COIL, SW ANT (TSR-580) COIL, SW2 ANT (TSR-585)	VR205	611N053P	VR, 20KA-MIX, MIC.
L6	639-003L	COIL, PADDING 180 $\mu$ H	<b>MISCELLANEOUS</b>		
L7	634-015C	COIL, MW OSC	VC1-4	622N048E	VARICON, POLY P2Z22BPT
L8	634N037F 634N020B	COIL, LW OSC (TSR-580) COIL, SW1 OSC (TSR-585)	BPF	616-011A	FILTER, BAND PASS
L9	634N020E 634N020C	COIL, SW OSC (TSR-580) COIL, SW2 OSC (TSR-585)	CF1	616-007A	FILTER, CERAMIC
L10	636-006D	COIL, CHOKE 330 $\mu$ H	LPF1, 2	616-009A 572-042B 572-034D 572-002A	FILTER, LOW PASS JACK-EXT. SP, MIC JACK JACK-HEADPHONE JACK-MIX. MIC.

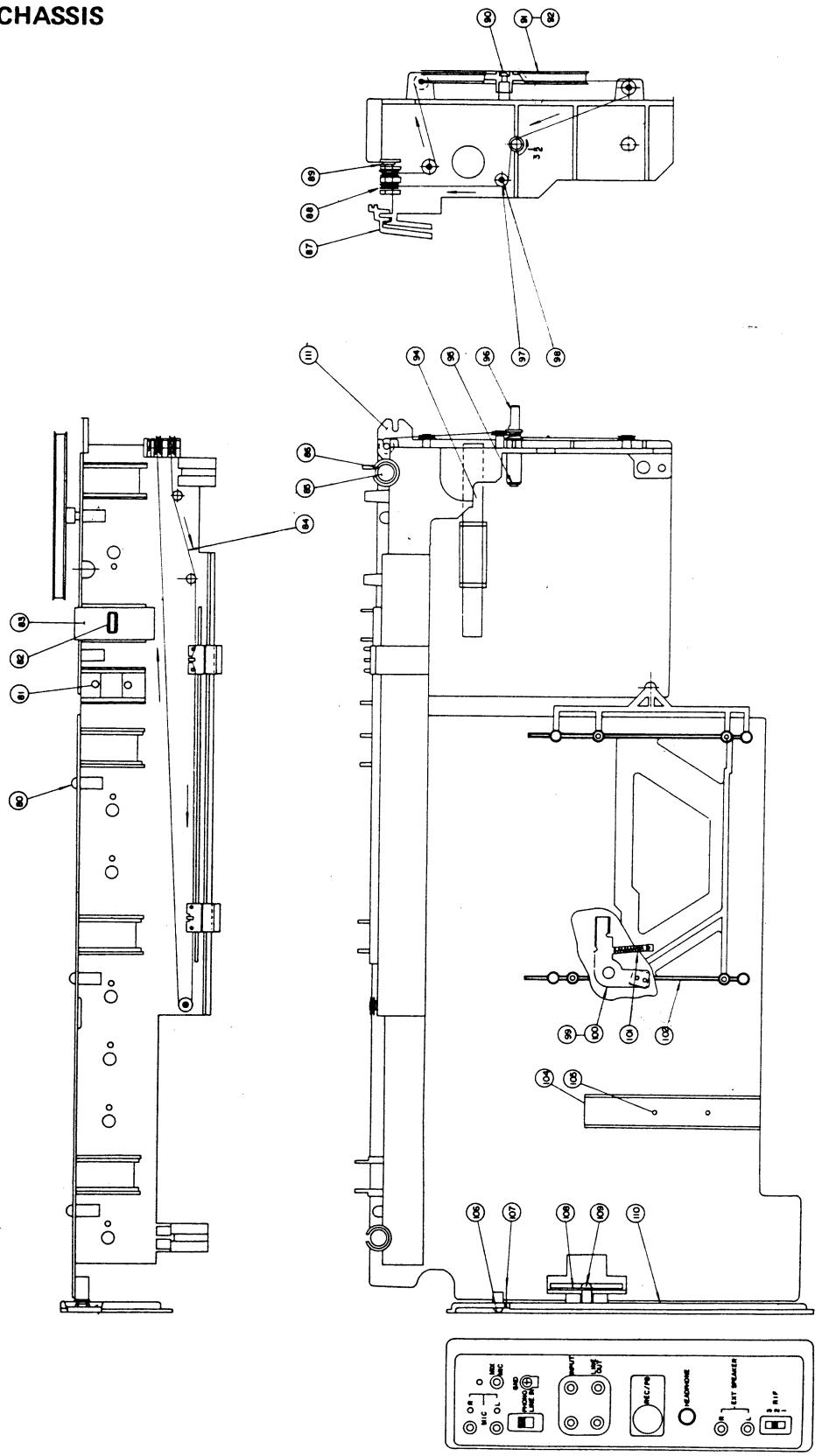
## EXPLODED VIEW FOR CABINET



## REAR CASE



## CHASSIS

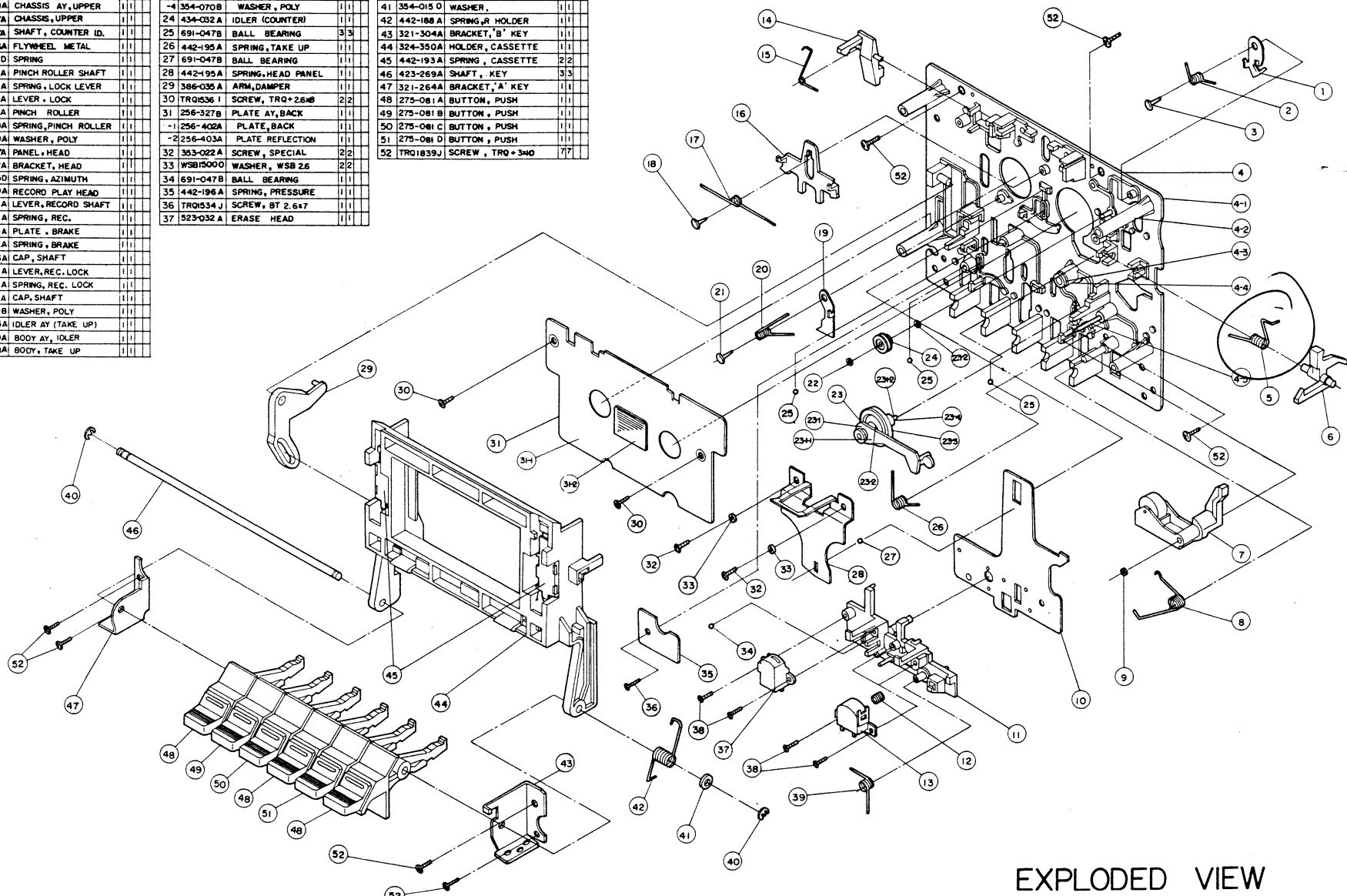


**PARTS LIST FOR CABINET EXPLODED VIEW**

NO.	PART NO.	DESCRIPTION	NO.	PART NO.	DESCRIPTION
1	252N198E	Plate Scale (TSR-585)	55	442N262A	Spring Batt (B)
	252N198D	Plate Scale (TSR-580)	56	353N025G	Screw Special
2	258N109A	Panel Clear	57	455N004E	Ribon Battery
3	224N033A	Grille Mic	58	254N028A	Plate Batt Cont (B)
4	253N068A	Special Screw	59	442N260A	Spring Batt(C)
5	253N006D	Plate Speaker Name	60		
6	TCQ1941J	Screw	61	447N056A	Cushion Battery
7	TRQ2243J	Screw	62	221N410B	Cover Vol Selector
8	224N034B	Grille Speaker (A)	63	254N025C	Screw Special
9	365N064B	Metal Speaker (A)	64	221N411A	Cover Battery
10	224N035B	Grille Speaker (B)	65	271N159A	Knob Tuning
11	365N072B	Metal Speaker (B)	66	324N422A	Holder Handle
12	217N247H	Csae Front (TSR-585)	67	442N261A	Spring Batt A
	217N247I	Case Front (TSR-580)	68	MAC1839L	Screw
13	WTB2200J	Lock Washer	70	532N035C	Antenna Rod
14	WSB2200J	C, Washer	71	MAC1845L	Screw
15	NHA2200J	Nut	72	261N098A	Handle
16	321N281A	Bracket AC Jack	73	272N085A	Knob Tone
17	353N025F	Screw Special	74	272N084A	Knob Volume
18	541-141A	Speaker Woofer	75	MPC1836J	Screw
19	353-025C	Screw Special	78	577-003B	2P Socket
20	541-119B	Speaker Tweeter	79	353-052C	Screw
21	353-052C	Screw	80	353N025G	Screw Special
22	217N251A	Case Shield	81	MPC1536J	Screw
23.	353-052C	Screw Special	82	273N271A	Knob S/W(A)
24	353-052J	Screw	83	221N413B	Cover Rubber (B)
25	447N068B	Cushion	84	886N0001	Cord Dial
26	273N270A	Knob Clock	85	542N023A	Mic Condenser
27	381N004A	Boss	86	447N015A	Bushing Mic
28	TRQ1536J	Screw	87	361A133A	Rointer
29	511-005C	Clock Ay	88	434N003F	Roller
30	328N008A	Lead band	89	423N272A	Shaft Pulley
31	353N025F	Screw Special	90	MPC1536J	Screw
32	324N423A	Holder LED	91	432N038A	Pulley Dial
33	251N164A	Plate CST Deco	92	442N004E	Spring
34	275N079A	Button Guard	94	632N043A	Coil Ay MW/SW1 Ant (TSR-585)
35	324N426A	Holder CST Cover		632N043B	Coil Ay MW/LW Ant (TSR-580)
36	246N027A	Deco, Holder CST	95	354N007D	Washer E-Ring
37	236N132A	Window CST Cover	96	423N397A	Shaft Tuning
38	246N026A	Deco, CST Cover	97	434N031A	Roller
39	251N163B	Plate Clock Deco	98	423N254A	Shaft Roller
40	273N272A	Knob Memory S/W	99	411-028A	Mechanism Rec
41	555N015B	Switch Push (Memory SW)	100	353N018A	Screw Special
42	TRQ1536J	Screw	101	442N004R	Spring
43	NHA1800J	Nut	102	313N157A	Chassis Deck
44	322N129A	Stopper Handle	104	255N053A	Plate Heat Sink
45	585N007J	Fuse 200mT	105	TRQ1839J	Screw
46	TRQ1836J	Screw	106	353N025L	Screw
47	585N113A	Holder Fuse	108	324N427A	Holder Jack
50	MPC2236J	Screw	109	353N018A	Screw Special
51	641-6560	Trans Power 220V	110	235-001B	Board Jack
52	321N368D	Bracket Power	111	313N156A	Chassis
53	384N029A	Battery Guide	112	217N246E	Case, rear (TSR-585)
54	254N029A	Plate Batt Cont(A)		217N246D	Case rear (TSR-580)

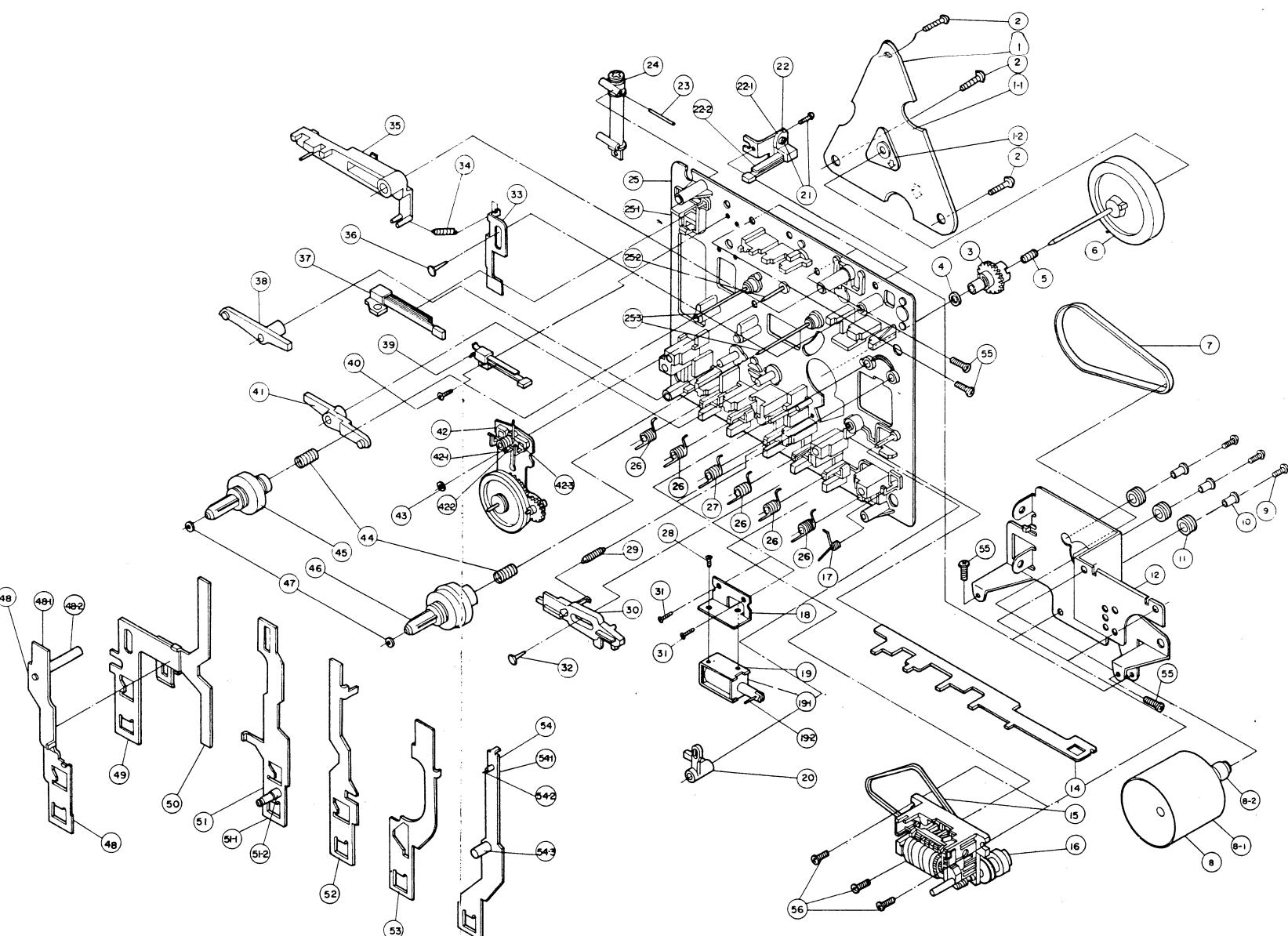
EXPLODED VIEW FOR DECK MECHANISM (D-301 FB 1/2) & PARTS LIST

NO	PART NO	DESCRIPTION	QTY	ABCD
1	374-007A	CAM, LEVER	1	1
2	442-175A	SPRING, PAUSE CAM	1	1
3	276-026A	CAP, SHAFT	1	1
4	311-170A	CHASSIS, AT, UPPER	1	1
-1	313-137A	CHASSIS, UPPER	1	1
-2	423-257A	SHAFT, COUNTER ID.	1	1
-3	344-006A	FLYHEEL, METAL	1	1
-4	442-101D	SPRING	1	1
-5	423-258A	PINCH ROLLER SHAFT	1	1
5	442-179A	SPRING, LOCK LEVER	1	1
6	333-124A	LEVER, LOCK	1	1
7	434-036A	PINCH ROLLER	1	1
8	442-180A	SPRING, PINCH ROLLER	1	1
9	354-070A	WASHER, POLY	1	1
10	258-097A	PANEL, HEAD	1	1
11	321-267A	BRACKET, HEAD	1	1
12	442-075D	SPRING, AZIMUTH	1	1
13	523-040A	RECORD PLAY HEAD	1	1
14	333-125A	LEVER, RECORD SHAFT	1	1
15	442-169A	SPRING, REC.	1	1
16	256-323A	PLATE, BRAKE	1	1
17	442-178A	SPRING, BRAKE	1	1
18	276-026A	CAP, SHAFT	1	1
19	333-122A	LEVER, REC. LOCK	1	1
20	442-176A	SPRING, REC. LOCK	1	1
21	276-026A	CAP, SHAFT	1	1
22	354-070B	WASHER, POLY	1	1
23	434-033A	IDLER AY (TAKE UP)	1	1
-1	316-039A	BODY AY, IDLER	1	1
-1	316-038A	BODY, TAKE UP	1	1



EXPLODED VIEW FOR DECK MECHANISM (D-301 FB 2/2) & PARTS LIST

NO	PART NO	DESCRIPTION	Q.TY	ABC'D
1	324-351A	HOLDER AY,FLYWHEEL	1	
-1	324-349A	HOLDER, FLYWHEEL	1	
-2	341-113A	BUSHING, TRUST	1	
2	TR01839J	SCREW, TR0-340	33	
3	433-033A	WHEEL, ACTION	1	
4	364-031D	WASHER	1	
5	442-101E	SPRING	1	
6	433-032A	FLYWHEEL, AY	1	
7	451-010B	RUBBER,BELT	1	
8	414-032C	MOTOR AY	1	
-1	414-045A	MOTOR	1	
-2	432-025B	PULLEY, MOTOR	1	
9	MPC522J	SCREW, MPC+2.6x4	33	
10	341-057A	BUSHING	33	
11	477-004A	RUBBER, MOTOR	33	
12	321-372A	BRACKET, MOTOR	1	
13	MPC1522J	SCREW, MPC+2.6x4	33	
14	256-321A	PLATE, LOCK	1	
15	451-011A	RUBBER, BELT	1	
16	517-008A	TAPE COUNTER	1	
17	442-184A	SPRING,LOCK PLATE	1	
18	321-266A	BRACKET, SOLENO	1	
19	691-070A	SOLENOID AY	1	
-1	691-072A	SOLENOID	1	
-2	423-265A	SHAFT,SOLENOID	1	
20	561-030A	CONNECTOR,AUTO STOP	1	
21	353-022A	SCREW, SPECIAL	2/2	
22	556-042A	SWITCH AY,PAUSE	1	
-1	321-265A	BRACKET, SWITCH	1	
-2	556-049A	LEAF SWITCH	1	
23	423-268A	SHAFT, AIR DAMPER	1	
24	444-001A	DAMPER, AIR	1	
25	311-171B	CHASSIS A:,REAR	1	
-1	313-139B	CHASSIS,REAR	1	
-2	423-262A	SHAFT, CEI TEE ID.	1	
-3	423-261A	REEL SHAFT	22	
26	442-186A	SPRING, LEVER	55	
27	442-186B	SPRING, LEVER	1	
28	MPC0922J	SCREW, MPC1x2x4	1	
29	442-110J	SPRING	1	
30	353-128A	LEVER, QUICK	1	
31	353-022A	SCRFW, SPECIAL	2/2	
32	276-026A	CAP, SHAFT	1	
33	561-028A	CONNECTOR,STOP EJECT	1	
34	442-073A	SPRING	1	
35	353-127A	LEVER, BRAKE	1	
36	276-026A	CAP, SHAFT	1	
37	556-055A	SWITCH,LEAF	1	
38	561-029A	CONNECTOR, REVIEW	1	
39	556-029A	SWITCH, LEAF	1	
40	353-022A	SCREW, SPECIAL	1	
41	561-031A	CONNECTOR, CUE	1	
42	434-036A	IDLER AY (CENTER)	1	
-1	434-040A	IDLER AY	1	
-2	442-181A	SPRING, CENTER ID.	1	
-3	442-182A	SPRING, SUPPORT	1	
43	354-070B	WASHER,POLY	1	
44	442-101C	SPRING, BACKTEN.	2/2	
45	436-004A	REEL AY(SUPPLY)	1	
46	436-005A	REEL AY(TAKE UP)	1	
47	354-070B	WASHER, POLY	2/2	
48	333-131B	LEVER, RECORD	1	
-1	333-118A	LEVER,RECORD	1	
-2	333-371A	LEVER RECORDER	1	
49	333-117A	LEVER, REWIND	1	
50	561-027A	CONNECTOR,REWIND	1	
51	333-130A	LEVER AY,PLAY	1	
-1	333-123A	LEVER,PLAY	1	
-2	322-121A	SUPPORTER,SPRING	1	
52	333-119A	LEVER,FF	1	
53	333-120A	LEVER,STOP EJECT	1	
54	333-129A	LEVER AY,PAUSE	1	
-1	333-121A	LEVER,PAUSE	1	
-2	423-267A	SHAFT, CAM	1	
-3	423-266A	SHAFT+PAUSE	1	
55	353-022B	SCREW, CT	4	
56	MPC1836J	SCREW, MPC+2.6x8	3	



EXPLODED VIEW

MODEL: D-301FB (2/2)